

CLAIMS

What is Claimed is:

1. A toothbrush, comprising:

an arced tray comprising a base and sidewalls defining a length of the arced tray,

5 a first longitudinal edge of each sidewall perpendicularly coupled to opposing longitudinal edges of the base to define a channel between the sidewalls, the channel adapted to receive teeth therein;

flexible flanges perpendicularly coupled to corresponding second longitudinal edges of each of the corresponding sidewalls opposite the corresponding first longitudinal edges, the flanges extending over a portion of the channel, a first end of the channel having a first width smaller than a second width at a second end of the channel; and

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a handle coupled to a side of the arced tray opposite the channel and extending therefrom, the curvature of the arced tray curving away from the handle.

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2. A toothbrush according to claim 1, wherein the arced tray is a first arced tray, and further comprising a second arced tray having a curvature opposite the curvature of the first arced tray, outer faces of the bases of the arced trays coupled together to form a single arced unit.

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3. A toothbrush according to claim 1, further comprising flexible protuberances extending from the base into the channel, and adapted to contact an occlusal surface of the teeth.

5 4. A toothbrush according to claim 3, wherein the flexible protuberances are integrally formed with the base.

5. A toothbrush according to claim 3, wherein flexible protuberances are located proximate the second width of the channel and adapted to contact occlusal surfaces of a
10 plurality of molars.

6. A toothbrush according to claim 1, wherein the arced tray is a flexible arced tray.

15 7. A toothbrush according to claim 6, wherein the arced tray is comprised of silicone.

8. A toothbrush according to claim 1, wherein the flanges extend a portion of the length of the arced tray.

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9. A toothbrush according to claim 1, wherein the channel is substantially tapered from the first end to the second end.

10. A toothbrush according to claim 1, wherein the handle is coupled to a side of the arced tray proximate the first end.
- 5 11. A toothbrush according to claim 1, wherein the handle is perpendicularly coupled to a neck coupled to a side of the arced tray.
12. A toothbrush according to claim 1, wherein the curvature of the arced tray is substantially coplanar to a length of the handle.
- 10 13. A toothbrush according to claim 1, wherein the curvature of the arced tray comprises an arc having two foci.
14. A toothbrush according to claim 1, wherein portions of the flanges proximate
- 15 the second end comprise curvatures on longitudinal edges thereof extending towards the channel, the curvatures adapted to substantially conform to corresponding side surfaces of at least one of the teeth.

15. A method for manufacturing a toothbrush, the method comprising:
- providing an arced tray comprising a base and sidewalls defining a length of the arced tray;
- coupling a first longitudinal edge of each sidewall perpendicularly to opposing longitudinal edges of the base to define a channel between the sidewalls, the channel adapted to receive teeth therein;
- forming flexible flanges perpendicularly on corresponding second longitudinal edges of each of the sidewalls opposite the corresponding first longitudinal edges, the flanges extending over a portion of the channel, a first end of the channel having a first width smaller than a second width at a second end of the channel; and
- coupling a handle to a side of the arced tray opposite the channel and extending therefrom, the curvature of the arced tray curving away from the handle.
16. A method according to claim 15, wherein providing an arced tray further comprises providing a first arced tray, the method further comprising providing a second arced tray having a curvature opposite the curvature of the first arced tray, and coupling outer faces of the bases of the arced trays together to form a single arced unit.
17. A method according to claim 15, further comprising forming flexible protuberances on the base, extending therefrom into the channel and adapted to contact a chewing surface of the teeth.

18. A method according to claim 17, wherein forming flexible protuberances further comprises integrally forming flexible protuberances with the base.
19. A method according to claim 17, wherein forming flexible protuberances further
5 comprises forming flexible protuberances proximate the second end of the channel and adapted to contact bottom surfaces of a plurality of molars.
20. A method according to claim 15, wherein providing an arced tray comprises providing a flexible arced tray.
- 10 21. A method according to claim 20, wherein providing a flexible arced tray further comprises providing a flexible arced tray comprised of silicone.
22. A method according to claim 15, wherein the flanges extend a portion of the
15 length of the arced tray.
23. A method according to claim 15, wherein coupling a first longitudinal edge further comprises coupling a first longitudinal edge of each sidewall perpendicularly to opposing longitudinal edges of the base to define a channel substantially tapered from
20 the first end to the second end.

24. A method according to claim 15, wherein coupling a handle comprises coupling a handle to a side of the arced tray proximate the first end.

25. A method according to claim 15, wherein coupling a handle comprises
5 perpendicularly coupling a handle to a neck coupled to a side of the arced tray.

26. A method according to claim 15, wherein providing an arced tray further comprises providing an arced tray with a curvature substantially coplanar to a length of the handle.

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27. A method according to claim 15, wherein providing an arced tray further comprises providing an arced tray with a curvature comprising an arc having two foci.

28. A method according to claim 15, wherein forming flexible flanges further
15 comprises forming flexible flanges wherein portions of the flanges proximate the second end comprise curvatures on longitudinal edges thereof extending towards the channel, the curvatures adapted to substantially conform to corresponding side surfaces of at least one of the teeth.